

# Rebecca M. McQuade

Department of Entomology  
University of Arizona

Phone: 719-271-9400  
Email: rmcquade@email.arizona.edu

## Current Position

Research associate, University of Arizona, USA  
NIH Postdoctoral Excellence in Research and Teaching fellowship (3 years from Oct. 2015)  
Mentor: Dr. Patricia Stock

## Research interests

Host-microbe interactions, bacterial pathogenesis, bacterial genetics, symbiosis

## Education

PhD, Microbiology, August 2015  
University of Arizona, Tucson, AZ

B.S., Nutritional Sciences, May 2008  
University of Arizona, Tucson, AZ

## Research Experience

Research Associate 2015-present  
Supervisor: Dr. Patricia Stock  
University of Arizona, Department of Entomology  
Molecular biology of *Xenorhabdus bovienii* symbiosis and virulence

Research Assistant 2009-2015  
Supervisors: Dr. Gayatri Vedantam and Dr. V.K. Viswanathan  
University of Arizona, School of Animal and Comp. Biomedical Sciences  
Molecular biology of *Clostridium difficile* pathogenesis

## Teaching Experience

Teaching Assistant: MIC 421B: Microbiological Techniques 2010-2014  
Prepared pre-lab lectures, demonstrated microbiology and molecular biology techniques, assisted students with writing and lab work.

Curriculum Development: MIC 421B: Microbiological Techniques 2010-2014  
Assisted in rewriting the lab manual and other course materials, designed two new lab modules.

Tutor: Student Alternative Learning Techniques, University of Arizona 2007-2008  
Nutrition, biology and microbiology tutor for undergraduate students with learning disabilities.

## Publications

**R. McQuade**, B.P. Roxas, V.K. Viswanathan, G. Vedantam. *Clostridium difficile* clinical isolates exhibit variable susceptibility and proteome alterations in response to mammalian cationic antimicrobial peptides. *Anaerobe* March 2012

G. Vedantam, A. Clark, M. Chu, **R. McQuade**, M. Mallozzi, V.K. Viswanathan. *Clostridium difficile* infection: Toxins and non-toxin virulence factors, and their contributions to disease establishment and host response. *Gut Microbes* March/April 2012

**R. McQuade**, K. Lammers, V.K. Viswanathan, G. Vedantam. Contribution of superoxide reductase to antioxidant defense and virulence in *C. difficile*. Manuscript in preparation

## Invited Presentations

Microlunch Interdepartmental Seminar, University of Arizona 2015  
“The (oxygen) tension is killing me: *Clostridium difficile* superoxide reductase is essential for virulence.”

American Soc. for Microbiology Regional Meeting, Las Vegas NV, USA 2014  
“Superoxide reductase of *C. difficile* is induced by host antimicrobial peptides and contributes to oxygen tolerance.”

Marshall Foundation Fellows Luncheon, Tucson AZ, USA 2014  
“*Clostridium difficile* – clever pathogen, major problem.”

Microlunch Interdepartmental Seminar, University of Arizona 2014  
“Something in the air: *C. difficile* superoxide reductase is an ROS scavenger.”

International Clostridial Pathogenesis Conference, Ames IA, USA 2011  
“Differential sensitivity of *Clostridium difficile* clinical isolates to mammalian cationic antimicrobial peptides”

Microlunch Interdepartmental Seminar, University of Arizona 2011  
“Resistance of *Clostridium difficile* to Innate Immune Molecules”

## Posters

UBRP Poster Session, University of Arizona <b>R. McQuade</b> , K. Lammers, V.K. Viswanathan, G. Vedantam "Superoxide reductase of <i>C. difficile</i> is an ROS scavenger with a role in infection"	2015
Frontiers in Immunobiology Symposium, Bio5 Institute <b>R. McQuade</b> , B.P. Roxas, V.K. Viswanathan, G. Vedantam. "Superoxide reductase of <i>C. difficile</i> is an ROS scavenger contributing to O <sub>2</sub> tolerance"	2014
UBRP Poster Session, University of Arizona K. Lammers, <b>R. McQuade</b> , G. Vedantam, V.K. Viswanathan. "Constructing New Tools for Random Mutagenesis in the Bacterial Pathogen <i>C. difficile</i> ."	2014
Anaerobe Conference, Chicago IL, USA <b>R. McQuade</b> , B.P. Roxas, V.K. Viswanathan, G. Vedantam. "Response of <i>Clostridium difficile</i> to the Human Antimicrobial Peptide Cathelicidin LL-37."	2012
Digestive Diseases Week, Chicago IL, USA <b>R. McQuade</b> , M. Mallozzi, V.K. Viswanathan, G. Vedantam. "Susceptibility of Epidemic and Non-Epidemic <i>Clostridium difficile</i> Isolates to Cationic Antimicrobial Peptides."	2011
<b>Outreach</b>	
Mentored undergraduates in Vedantam and Stock labs	2010-present
Volunteer at annual Arizona Insect Festival, University of Arizona	2015
Judge for annual SARSEF regional science fair, Tucson	2014-present
Small group mentor for Honors Biology 181, University of Arizona	2013
<b>Awards, fellowships, grants</b>	
NIH IRACDA (PERT) Fellowship	2015-present
Marshall Foundation Dissertation Fellowship	2014
Graduate College Merit Fellowship	2015
Graduate and Professional Student Council Travel Grant	2011
Best Oral Presentation, ASM Regional Meeting	2014
Finalist for CALS Meritorious Award for Graduate Teaching Assistant	2013
Department Award: Outstanding Graduate Student in Teaching	2012
Department Award: Outstanding Graduate Student in Research	2011